NOGCC Public Hearings

8:24 am - 11:28 am Tuesday, January 25, 2022 | (UTC-07:00) Mountain Time (US & Canada)

Hearing Control NOGCC Hearing Room Dylan Glaser D Chris Peterson Robert Van Voorhees FRONT ROOM NOGCC tom solon Chuck Woodside NOGCC Conference Room Pete Feutz JB Colin Myer Call-in User\_3 Call-in User\_2 Call-in User\_5 Call-in User\_4 Jon Cartlidge

WEBVTT

1

NOGCC Hearing Room 00:00:10.120 --> 00:00:12.125

We will proceed.

2

NOGCC Hearing Room 00:00:15.155 --> 00:00:34.805

Public meeting is held in compliance with revised state statutes, uh, 8,414 and 7 through 14, 14, which is your meetings Zach is posted up on her wall over here any actions or decisions today will be made and pull in public session.

3

NOGCC Hearing Room 00:00:42.485 --> 00:00:46.265

This is case number 21 dash o8.

4

NOGCC Hearing Room 00:00:48.484 --> 00:01:08.374

In our case file today, uh, is entitled notice of rule making hearing Nebraska, oil, gas conservation commission. Notice here by given that the Nebraska oil gas conservation commission will hold a rule making hearing on January 25th, 2022.

5

NOGCC Hearing Room 00:01:09.214 --> 00:01:30.184

At 10, 0 am Mountain Time in the office of Nebraska oil, gas, conservation commission. 625 ward drive Sydney, Nebraska 6,962 or case file today contains the original application. They didn't received November, 18, 2020.

6

NOGCC Hearing Room 00:01:30.189 --> 00:01:50.494

1, for an order revising title, 267 chapters, 13 and 6, and the addition of chapter 7 or the Nebraska storage of carbon dioxide act signed by Stan blue director a legal notice dated December, 14.

7

NOGCC Hearing Room 00:01:51.425 --> 00:02:12.485

2021 signed by Mr. blue director, giving notice of the date time in place of this hearing publishers affidavit received December, 14 2021 in the Omaha world Herald, stating that the legal notice of this hearing was published in their newspaper on December.

8

NOGCC Hearing Room 00:02:12.489 --> 00:02:33.634

For 2,022,021, publisher’s affidavit received December 14th 2021 in the Lincoln Journal star, stating that the legal notice of this hearing was published in their newspaper on December 20th, 2021, our copy of the notice of rulemaking.

9

NOGCC Hearing Room 00:02:33.639 --> 00:02:42.424

Hearing I was posted on the state of Nebraska of the calendar website, or January 25th, 2022.

10

NOGCC Hearing Room 00:02:46.205 --> 00:02:55.595

This time I'll turn her hearing over for a director of blue to go down through our proposed rules and regulations on case number 21.

11

NOGCC Hearing Room 00:02:57.965 --> 00:03:18.245

Thank you Mr. Chairman for purposes. The record my name is Stan blue, and I serve as the director of the Nebraska oil and gas commission this application today. 6 to modify chapters 13 in 6 of the commission’s current rules, and add a new chapter. 7.

12

NOGCC Hearing Room 00:03:19.354 --> 00:03:39.904

Case number 21 dash 8 that we're hearing today is the result of the legislature passing 650 and the signature thereafter of our governor 150 is titled the geological storage of carbon dioxide act. The.

13

NOGCC Hearing Room 00:03:40.174 --> 00:04:01.054

Resulting statutes that came from 150 are 57 dash 16 or 1 through 24. the governing statutes are statutes. And as you probably know statutes can only be changed by the legislature. What we're doing here is we're.

14

NOGCC Hearing Room 00:04:12.375 --> 00:04:32.805

On what they are, and what they do and can be modified by an agency governing board, such as yourselves through the hearing process rule, making done by any state agency requires certain procedures, be followed, including notification of the hearing.

15

NOGCC Hearing Room 00:04:32.809 --> 00:04:53.954

The notice of the rulemaking process agencies are required to notice the governor's office, the secretary of state's office and the legislatures executive board and we believe that all these requirements have been fulfilled. Additionally, we are required to do 2 hearing.

16

NOGCC Hearing Room 00:04:53.984 --> 00:05:14.864

On this, so today's our 1st scheduled 1 and then if everything goes as planned, our next scheduled hearing will be in our next hearing date, which is February 22nd. The rule that we're reviewing it. This hearing is really the efforts of the rules committee that.

17

NOGCC Hearing Room 00:05:15.314 --> 00:05:35.714

Began this rulemaking process back in October this committee that was established consisted of interested and affected parties and these were potential people that would be regulated from the different industries affected Co regulators.

18

NOGCC Hearing Room 00:05:37.364 --> 00:05:41.354

Academics attorneys and an.

19

NOGCC Hearing Room 00:05:42.914 --> 00:06:02.144

We can't overemphasize enough their hard work on this in the amount of time and dedication that they put in to this process. And so I, the record will state that we're very, very we're very thankful for their efforts on our part.

20

NOGCC Hearing Room 00:06:03.284 --> 00:06:24.194

Um, we'd also like to point out that since November 25th, there has been a link on our website that is allowed for people to make comments as they needed. All those comments that we've collected would be incorporated and we can.

21

NOGCC Hearing Room 00:06:24.225 --> 00:06:30.255

That we received 2 comments since November 25th, so.

22

NOGCC Hearing Room 00:06:53.065 --> 00:07:06.835

Your permission Mr. chairman, we'd like to begin the arduous process of going through this application on a word by word basis. You may proceed. Thank you.

23

NOGCC Hearing Room 00:07:09.805 --> 00:07:15.655

So, the requirement that we go through this in a word by word process is part of the rule making and.

24

NOGCC Hearing Room 00:07:18.894 --> 00:07:39.954

What you're seeing up on the board, if you fall along with, that is really the existing roles that we have when we looked at the spirit of 150 we believed it it required our agency to incorporate this new section into our rules and use.

25

NOGCC Hearing Room 00:07:39.959 --> 00:08:00.924

Some of our existing rules that were necessary to fulfill the needs of lb 650. so, that's what we're seeing. 1 of the things that you can see is in addition to chapter 1, that basically says the geological story. Jack means the Nebraska Geological storage of carbon dioxide.

26

NOGCC Hearing Room 00:08:01.194 --> 00:08:21.774

Act, Nebraska revised statute section 5716.1 to 57, zach's 1624 next. We'll go to chapter 3 in our current rules and regulations that deals with our regulations for the growing development and producing the wells.

27

NOGCC Hearing Room 00:08:22.284 --> 00:08:43.374

And this talks about the location of wells, and clearly, Nebraska is on 40 acres spacing when we're doing stratigraphy tests, as we would be on some of these wells, that kind of spacing. Is it necessary? So, the language stratigraphy test tools drilled for geological storage.

28

NOGCC Hearing Room 00:08:43.434 --> 00:09:03.384

Is added to that they allow for exemptions from those spacing rules. The chapter 6 is the rules of practice and procedure before Nebraska, oil and gas commission and at 04.08, the cost of a hearing.

29

NOGCC Hearing Room 00:09:04.825 --> 00:09:25.705

A sufficient petition filed with the commission for a public hearing shall be accompanied by filing fee of what was formally 250 dollars. And now she'll be 1200 dollars the section. 06 point a time of notice.

30

NOGCC Hearing Room 00:09:25.710 --> 00:09:42.685

Urgency orders before any role regulation order amendment thereof shall be made before the commission. There shall be held a public hearing process. What was formally at least 15 days is now moved to 30 days.

31

NOGCC Hearing Room 00:09:46.194 --> 00:10:06.594

Going to the next page, this requirement Commission, shell issue, an emergency order with notice of the hearing, which I'll be effective upon propagation, which will remain in effect for no more than originally. It was 20 days. Now it's 30 days.

32

NOGCC Hearing Room 00:10:08.575 --> 00:10:27.745

Say the next section that is 006.42 a, the, once again, the certification by mail that had to be done at least 15 days. Ahead is now 30 days and further.

33

NOGCC Hearing Room 00:10:27.774 --> 00:10:48.864

On in that section, there is a section added that states for the purpose of carbon dioxide storage. The term interested party shall mean those persons that own a reservoir state and the next section.

34

NOGCC Hearing Room 00:10:48.925 --> 00:11:10.015

006.4 g, in all cases where there is an application for geological storage in addition to the notice of the hearing as required by the act, the applicant shall serve notice of the hearing upon interested parties. The term interested parties shaming those persons who own.

35

NOGCC Hearing Room 00:11:10.049 --> 00:11:31.194

Reservoir a state owner, leasehold, mineral royalty, interest in surface owner of land. Overlying the surface reservoir. And within 1, half mile of the storage reservoir boundaries applicant shall file a certificate, showing the names and addresses.

36

NOGCC Hearing Room 00:11:31.199 --> 00:11:52.344

Of the interested parties as above identified upon whom the notice is or will be served. So, the next section is H, and at the bottom of that, the change there is just quoting the statutory lb 650.

37

NOGCC Hearing Room 00:12:07.620 --> 00:12:28.765

Language that we'll be talking about from here on will be new language that is part of this new chapter 7. so, this becomes really the, the body, the corpus of this whole Geological secret.

38

NOGCC Hearing Room 00:12:28.769 --> 00:12:49.824

So, the 1st part is definitions, and the terms throughout this chapter, she'll have the same meeting is entitled to 67 chapters 1 in Nebraska revise statutes 5,701 as indicated here with these additional terms number.

39

NOGCC Hearing Room 00:12:49.919 --> 00:13:11.064

1 abandoned well, abandoned well means a well that abandon well means a well who's use has been temporary discontinued or which is in a state of disrepair, such as it cannot be used for its intended purposes or for apps innovation purposes. Number 2.

40

NOGCC Hearing Room 00:13:11.069 --> 00:13:29.994

Activity activity means any activity regulated to the geological storage of carbon dioxide subject to regulation under this chapter in Nebraska revised statutes 57 Dash, 16 and 1, et cetera.

41

NOGCC Hearing Room 00:13:34.104 --> 00:13:53.364

Acceptable applicable underground injection control program for each class of storage facility injection. Well, means the program or most recent amendment there for that class of well, in Nebraska is provided by federal law.

42

NOGCC Hearing Room 00:13:53.370 --> 00:14:14.095

Number 4 means the geological formation, a group of formations, or part of a formation that is capable of yielding a significant amount of water to a well, spring or other point of discharge. 5 area of review review means the regions surrounding the geological.

43

NOGCC Hearing Room 00:14:14.519 --> 00:14:35.664

Storage project, we're underground sources of drinking water. Maybe endangered by injection activities. Number 6 bond rating, bond rating means rating assigned to any long term senior security indebtedness issued by, or on behalf of the storage operator, including any in depth in depth.

44

NOGCC Hearing Room 00:14:36.804 --> 00:14:56.604

Issued by any governmental authority with respect to which the storage operation is the obliged. The number 7 carbon dioxide plume means the extent of underground in 3 dimensions of an injected carbon dioxide stream.

45

NOGCC Hearing Room 00:14:57.024 --> 00:15:17.844

Number 8, carbon dioxide stream means carbon dioxide from epigenetic sources, including incidental associated substances derived from the source materials in the production, or capture process and any substance added to the stream to enable, or improve the injection process. If.

46

NOGCC Hearing Room 00:15:18.714 --> 00:15:39.024

Such substances will not comprise the safety of the geological storage and will not compromise those properties reservoir storage, which allow the reservoir to effectively enclose and contain the stored carbon dioxide stream. This does not apply to carbon dioxide stream that meets the definition of.

47

NOGCC Hearing Room 00:15:39.325 --> 00:16:00.265

Hazardous Waste number 9 casing casing means a pipe or tube of varying diameter in weight, which is installed into a well to maintain the structural integrity of that. Well, number, 10 closure, period closure period means the period from permanent succession.

48

NOGCC Hearing Room 00:16:00.594 --> 00:16:11.664

Of carbon dioxide storage until the commission issues, the certification of the project complete commission means the Nebraska oil and gas conservation commission.

49

NOGCC Hearing Room 00:16:14.370 --> 00:16:35.365

11 confining zone means a geological formation. Group of formations are part of a formation stratigraphy overlying the injection zone that acts as a barrier to fluid movement or injection wells operating under an injection tdap waiver and finding zone means.

50

NOGCC Hearing Room 00:16:35.519 --> 00:16:56.664

Logic formation, group of formations are part of a formation strata, graphically overlying or underlying the injections and 12 contaminant means any physical chemical, biological or radiological substance in manner. Or in matter in the water corrective action means the use of.

51

NOGCC Hearing Room 00:16:56.694 --> 00:17:17.813

Commission approved methods to ensure that wells within the area of review do not serve as conduits for the movement of fluids into underground sources of drinking water director means the director or authorized agent within Nebraska, oil and gas conservation commission of the state of Nebraska exempted awkward for means an awkward for.

52

NOGCC Hearing Room 00:17:17.933 --> 00:17:38.904

Or the portion that meets the criteria, and the definition of underground sources of drinking water, which has been exempted by the director facility area means the arrow extent of the storage reservoir fault means the surface or zone of rock fracture along, which there has been displaced.

53

NOGCC Hearing Room 00:17:39.834 --> 00:18:00.114

Flow line means flow lines, transporting carbon dioxide from carbon dioxide injection injected facilities to the wellhead. Fluid means any material or substances, which flows moves whether in a semi solid liquid sludge gas, or any other state formation means a body.

54

NOGCC Hearing Room 00:18:00.624 --> 00:18:20.904

Characterized by the degree of pathology homogeneous, which is prevailing, but not necessarily tabular, which is mappable on the earth service or traceable in the subsurface formation. Fluid means the fluid present in the formation international conditions, as opposed to introduced fluids.

55

NOGCC Hearing Room 00:18:21.624 --> 00:18:42.414

Formation for actual pressure means the pressure majored in pounds per square inch, which, if applied to the sub surface formation will propagate fractures in that formation. Geological administration or storage means the placement of gases, liquid or Super critical carbon dioxide stream.

56

NOGCC Hearing Room 00:18:42.624 --> 00:19:03.324

Logic storage reservoir this term does not apply to carbon dioxide captured or transport Geological storage project means an injection where our wells used to in place a carbon dioxide stream beneath the lower most formation, containing underground sources of drinking water or wells used for.

57

NOGCC Hearing Room 00:19:03.744 --> 00:19:24.354

Geological stories that have been granted a waiver of injection depth controls, or wells that have been used for July stories that receive an expansion to the area extent of existing and oil or gas recovery. Awkward for exemption includes the sub surface. 3 phase extent.

58

NOGCC Hearing Room 00:19:24.954 --> 00:19:45.864

Carbon dioxide as well as the associated front Geological storage means the permit or short term short term underground storage of carbon dioxide streams in a storage reservoir groundwater means water that's occurring beneath the surface of the ground that fills available openings.

59

NOGCC Hearing Room 00:19:45.869 --> 00:20:06.804

Iraq or slow materials, such that they may be considered saturated injection. Well, means a non experimental. Well, he used to inject carbon dioxide into withdraw carbon dioxide from a reservoir injection zone means a geological formation. Group of formations are part of a formation that is of sufficient.

60

NOGCC Hearing Room 00:20:07.105 --> 00:20:28.165

To extend thickness ferocity and permeability to receive carbon dioxide through a well associated with Geological storage progress. Mechanical integrity means the absence of significant leakage within an injection wells tubing casing or Packer, internal, mechanical integrity or outside the.

61

NOGCC Hearing Room 00:20:28.194 --> 00:20:49.284

The external mechanical integrity minerals means coal oil, natural gas model means a representation or simulation of phenomenon or process. That is difficult to observe directionally. That occurs over long time frames models that support Geological storage can predict.

62

NOGCC Hearing Room 00:20:49.344 --> 00:21:10.464

Flow of carbon dioxide within the subsurface accounting for the properties and fluids content of the sub surface formation and effects of the injection parameters. Operational period means the food in which when which injection incurs pack means a device lowered into a well.

63

NOGCC Hearing Room 00:21:10.494 --> 00:21:31.614

Extended or compress to produce a fluid tight seal permit means a permit issued by the commission under the Nebraska Geological storage of carbon dioxide act, allowing a person to operate a storage facility person means a individual association partnership cooperation municipality state.

64

NOGCC Hearing Room 00:21:31.644 --> 00:21:52.314

Federal for travel agency, or an agency or employee thereafter club, or plugging means an act or process of sealing the flow fluid into, or out of a formation through a well bore or well penetrating that formation post closure. Period means the period.

65

NOGCC Hearing Room 00:21:52.795 --> 00:22:13.855

Commission has issued a certification or a certificate of a project completeness post injection site care means the appropriate monitoring and other actions, including corrective action needed following sucession of injection to ensure that underground sources of drinking water are not endangered post injection site.

66

NOGCC Hearing Room 00:22:13.974 --> 00:22:35.004

May occur in the closure, or post closure amounts pressure means the total load or force per unit area acting on the surface pressure. Front means the zone of pressure and this place fluids created by the injection of carbon dioxide.

67

NOGCC Hearing Room 00:22:35.069 --> 00:22:48.744

Surface the pressure in front of a carbon dioxide refers to his own where there is pressure differential sufficient to cause the movement rejected fluids or formation fluids into the ground sources of drinking water.

68

NOGCC Hearing Room 00:22:51.054 --> 00:23:11.724

Project completion means the point in time is determined by the commission at which the certification a project completed issued in the storage operation is released from all regulatory requirements associated with storage facility. Reservoir means the subsurface stratum formation cavity or void. Whether natural.

69

NOGCC Hearing Room 00:23:11.729 --> 00:23:32.874

Officially created suitable for or capable of receiving through a well and geologically storing carbon dioxide reservoir state means the ownership of any portion of the storage reservoir schedule of compliance means to schedule of remedial measures, including in a permit, including enforceable sequence.

70

NOGCC Hearing Room 00:23:32.905 --> 00:23:53.665

Of interim requirements, for example, actions operations or milestone events leading to compliance with the appropriate act and regulation site means the land or water where any facility or activity is physically located, or conducted, including adjacent land use in production with the facility or activity.

71

NOGCC Hearing Room 00:23:54.175 --> 00:24:14.575

Closure means the point or time as determined by the director, following the requirements under the applicable underground injection patrol program, which at the cost, which is the owner operator of a geological storage site is released from post injection site. Here.

72

NOGCC Hearing Room 00:24:15.179 --> 00:24:24.804

Stratum means a single strata sedimentary bed or layer regardless of thickness. That consists generally the same kind of raw material.

73

NOGCC Hearing Room 00:24:33.714 --> 00:24:54.654

Storage facility means that the storage reservoir underground equipment and surface facilities and equipment use, or propose to be used in geological storage operation. The term includes injection. Well, and equipment used to connect the surface facility and the equipment to the underground reservoir and storage equipment.

74

NOGCC Hearing Room 00:24:55.014 --> 00:25:15.264

The term does not include pipelines used to transport the carbon dioxide to the storage facility. Storage operator means a person holding or applying for a permit under the act and storage reservoir means the reservoir proposed authorized and used for storing 1 or more carbon streams pursuant to a permit.

75

NOGCC Hearing Room 00:25:16.344 --> 00:25:36.444

The term does not include reservoirs, used for purposes, other than the storage of carbon dioxide streams sub surface observation. Well means a well used to observe subsurface phenomenon, including the presence of carbon dioxide pressure, fluctuations, fluid levels and flow.

76

NOGCC Hearing Room 00:25:37.074 --> 00:25:57.984

Your insight to water chemistry, transmission fault, or fracture means the fault or a fracture that is sufficient permeability and vertical extent to allow fluids to move between the formations. Trapping means the physical and geochemical process. It is used to inject carbon dioxide.

77

NOGCC Hearing Room 00:25:58.194 --> 00:26:19.254

Is sequestered in subsurface, physical trapping occurs when a buoyant carbon dioxide rises in the formation until it reaches in the permeable strata that inhibits further upward and lateral migration or as mobilized and poor spaces due to capillary forces chemical trapping occurs when the chemical reaction.

78

NOGCC Hearing Room 00:26:19.260 --> 00:26:40.405

Between the injected carbon dioxide and naturally occurring minerals in the fluid lead to the precipitation of solid carbonate minerals at the solution information, fluids, underground sources. A drinking water means an awkward for any portion of an awkward for supplies.

79

NOGCC Hearing Room 00:26:40.434 --> 00:27:01.554

Drinking water for human consumption, or in which groundwater containing fewer than 10,000 milligrams per liter, total dissolve. Solids is not an example offer as determined by the director. Well means a bore drilled or shaft driven shaft, or dug a hole whose death is greater than the largest.

80

NOGCC Hearing Room 00:27:01.559 --> 00:27:22.524

Surface dimension, or improve single or subsurface, fluid distribution system. All other words used here in shall be given their usual and customary accepted meaning in all words of technical nature or particular to the oil and gas industry shall be given that meeting that is generally accepted.

81

NOGCC Hearing Room 00:27:23.094 --> 00:27:31.014

Gas industry the next section is.

82

NOGCC Hearing Room 00:27:31.170 --> 00:27:52.315

1 storage permit storage facility, permit an application for a permit must include the following a site map, showing boundaries of the storage reservoir and location. The proposed wells proposed board holes and surface facilities.

83

NOGCC Hearing Room 00:27:52.319 --> 00:28:13.464

And within the carbon dioxide storage area, to the technical Geological, hydro, hydro, Geological evaluation of the proposed storage facility, including a, the immediate confining layer, containing containment characteristics, and all subsurface zones.

84

NOGCC Hearing Room 00:28:13.469 --> 00:28:33.654

We used for monitoring be the evaluation must occur any available to physical data and assessment of any original tonic activity, including local, seismic city and regional local fault zones and a comprehensive description of local and regional structure and stratigraphy features.

85

NOGCC Hearing Room 00:28:34.644 --> 00:28:55.704

The evaluation must occur must describe the geological reservoirs mechanisms, Geological confinement, including the rock properties, regional pressure, gradient, structural features, a absorption characteristics with regard to ability of that confinement to prevent migration of carbon.

86

NOGCC Hearing Room 00:28:55.794 --> 00:29:16.824

Oxide beyond the proposed storage reservoir D, the evaluation must identify the production any productive existing or potentially commercial valuable, minimal zones occurring within the facility area, or any underground sources of drinking water in the facility area. And within 1.

87

NOGCC Hearing Room 00:29:16.920 --> 00:29:38.065

Half mile of the outside boundary, the evaluation must do include exhibits in plan view map, showing the following. Hi, all wells, including water. Well, natural gas exploration and development wealth and other manmade subsurface structures and activities within.

88

NOGCC Hearing Room 00:29:38.094 --> 00:29:59.184

The facility area, and within 1, half mile, the outside boundary 2, all manmade surface structures that are intended for temporary or permanent human occupancy within the facility area, and a half mile site boundary. Any regional or local faulting a.

89

NOGCC Hearing Room 00:29:59.244 --> 00:30:20.364

I suspect map of storage reservoirs and map of the primary and secondary containment boundaries from storage reservoir, the structure map of the top and base of the reservoirs identification of all structural spill points or stratigraphy discontinue. It's controlling the isolation.

90

NOGCC Hearing Room 00:30:20.369 --> 00:30:41.514

Of the store, carbon dioxide associated fluids within the storage reservoir evaluation of the pressure front and potential impact of underground sources, drinking water, or any structural and stratigraphy cross sections and any renderings that describe the geological conditions of the storage reservoir. The location orientation.

91

NOGCC Hearing Room 00:30:41.519 --> 00:31:02.424

And properties of known or suspected faults and fractures that may transact the confining zone in the area of review, and a determination that will not interfere with containment data on any depth area, or extent thickness meteorology, ferocity, permeability, capillary pressure of the injection.

92

NOGCC Hearing Room 00:31:02.725 --> 00:31:23.545

Confining zones, including faces change based on the field, which may include Geological cores. How crop? Data? Seismic surveys well, logs the names and mythologies and descriptions. geochemical information on fracture, stress, adaptive rock strength.

93

NOGCC Hearing Room 00:31:23.819 --> 00:31:44.964

Insight to fluid pressures within the confining zone combining zone must be free of transmitted faults and fractures and it's sufficient aerial extent and integrity and integral to contain the injected carbon dioxide stream information on the size of the history.

94

NOGCC Hearing Room 00:31:44.969 --> 00:32:06.114

Putting the presence in depth and seismic sources, determination that size may not would not interfere with containment, Geological, talk, logical maps, cross section, illustrating, regional geology, hydro geology and the geological structure of the identified area and the identified.

95

NOGCC Hearing Room 00:32:06.144 --> 00:32:27.264

Characteristics additional strata overlying the storage reservoir that prevent future vertical fluid movement are free of transmitted falter, fractures and allow for pressure this participation and provide for additional opportunities for monitoring migration and remediation.

96

NOGCC Hearing Room 00:32:30.204 --> 00:32:48.204

A review the date of the public record conduct by a geologist or engineer for all the wells within the facility area, which penetrate the etiologic reservoir or primary secondary seals overlying the reservoir and all wells within the facility.

97

NOGCC Hearing Room 00:32:48.419 --> 00:32:57.654

Within 1, half mile radius that deem necessary for the commission or facility boundary the review must include the following.

98

NOGCC Hearing Room 00:32:59.699 --> 00:33:20.844

Combination that all abandoned wells have been plugged and all operating wells have been constructed in a manner that prevents carbon dioxide associated food from escaping from the reservoir. A description of each wells type and construction. They drilled location, depth, record of plugging and completion maps and stratigraphy.

99

NOGCC Hearing Room 00:33:20.849 --> 00:33:41.964

Structural cross sections indicating the vertical and lateral limits of all underground sources of drinking, water, water, wells and springs within the review area, or area of review their positions relative to the injection zone and measured or inferred direction of water movement. A map.

100

NOGCC Hearing Room 00:33:42.025 --> 00:34:03.145

The area of review showing the number or name and location of all injection wells, producing wells, abandoned wells, plugged wells or dry holes deep stratigraphy bore holes stayed approved or U. S, environmental protection agency approved subsurface, clean up sites, surface bodies of water.

101

NOGCC Hearing Room 00:34:03.149 --> 00:34:24.294

Brings minds, surface and sub surface quarries, water wells, other pertinent surface features, including structures intended for human occupancy, state County, Indian country, boundary lines and roads. A list of contacts submitted to the.

102

NOGCC Hearing Room 00:34:24.324 --> 00:34:44.243

Commission when the area of review extends across state, judicial or gestational boundary lines, baseline geochemical data on sub surface formations, including all underground sources of drinking water in the area review and any additional information, the condition may require.

103

NOGCC Hearing Room 00:34:45.714 --> 00:35:06.234

The proposed calculated daily, average in maximum, daily injection rate, daily volume and total anticipated volume of carbon dioxide stream, using a method acceptable and filled with, in filed with commission propose average maximum bottom.

104

NOGCC Hearing Room 00:35:06.599 --> 00:35:27.744

Injection pressure to be utilized at the reservoir the maximum allow injection pressure measured in pounds per square inch gauge shall be approved by the commission and specified in the permit and approving the maximum injection pressure limit. The commission show consider the results of test wells and other studies that assessed.

105

NOGCC Hearing Room 00:35:27.750 --> 00:35:48.895

The risk of technical fracturing and sure. Failure the commission shall approve the limits that the reasonable degree of certainty will avoid initiating new fractures or propagating an existing fracture in a confining zoner cause the movement of injection of formation fluids into an underground source of drinking water.

106

NOGCC Hearing Room 00:35:48.899 --> 00:36:10.014

Those Pre, operational formation testing program to be obtained analysis of the chemical and physical characteristics of the injection zone and confining zone for post stimulation program. The description of the stimulation flows to be used the determination that the simulation will not interfere with containment.

107

NOGCC Hearing Room 00:36:10.344 --> 00:36:30.024

Description of the site specific processes that will result in carbon dioxide trapping, including immobilization by capillary action. The solution mineralization at the site predicted rate of carbon dioxide trapping in a mobile capillary phase is all phase or minimal phase.

108

NOGCC Hearing Room 00:36:31.374 --> 00:36:52.344

Submitting a class 6 permit obtain from the applicable underground injection control program shall satisfy all the requirements of section 1 through 9 of this section demonstrating with respect that demonstrations with respect to storage.

109

NOGCC Hearing Room 00:36:52.349 --> 00:37:13.494

Afford that the storage operators made a good faith effort to attain the consent of all persons who represent reservoir with states within the storage area that the storage offer is a team the consent of persons who own physical States comprising at least 60% of the physical volume contained.

110

NOGCC Hearing Room 00:37:13.500 --> 00:37:34.645

Within the defined storage reservoir and all non concerning reservoir state owners are, or will be equitably compensated operation of the geological storage permit. Shell require the issuance of a.

111

NOGCC Hearing Room 00:37:34.649 --> 00:37:41.034

6 permit by the appropriate for the applicable underground injection control programme.

112

NOGCC Hearing Room 00:37:44.724 --> 00:38:03.804

Permit fee any person following a permit application or an application to amend an existing permit. So I'll pay a processing fee. The theme will be based on the actual process and costs, including computer data processing cost incurred by the commission. A record.

113

NOGCC Hearing Room 00:38:04.765 --> 00:38:25.405

Clickable processing costs occurred must be maintained by the commission promptly after receiving an application, the commission chop repair and submit to the applicant. An estimate of the processing fee and a permit billing schedule after the commission's work on an application is.

114

NOGCC Hearing Room 00:38:25.410 --> 00:38:46.375

Continue the final statement will be sent to the applicant of full processing fee must be paid before the commission issues its final decision on an application. The application, the applicant must pay the processing fee, regardless of whether or not the permit is issued or denied or the application is withdrawn.

115

NOGCC Hearing Room 00:38:46.794 --> 00:38:56.484

Commission has 1 year from the date of the application to deem to deem a complete to issue a final decision regarding the application.

116

NOGCC Hearing Room 00:38:59.249 --> 00:39:20.394

02 storage facility, permit transfer the storage operator shall notify the commission in writing of any proposed, permit transfer. The notice shall contain the following the name and address of the person to whom the permit is to be transferred.

117

NOGCC Hearing Room 00:39:21.295 --> 00:39:41.545

The name of the permit, the name of the permit subject to the transfer and the location of the storage facility, and description of the land within facility. The date that this storage operator desires the proposed transfer to occur demonstration of financial concerns commission review the.

118

NOGCC Hearing Room 00:39:41.549 --> 00:40:01.824

Michelle shall review the proposed transfer to ensure that the purposes are not to compromise, but rather are promoted for good cause the commission may deny the transfer request delay the lay acting on it in place conditions on the approval commission. Me.

119

NOGCC Hearing Room 00:40:02.699 --> 00:40:23.844

Prove the commission approval a permit transfer only upon the commission's written order 003 hearing notice requirements. So, this section comes from title 269, which is existing, Nebraska, oil and gas.

120

NOGCC Hearing Room 00:40:23.849 --> 00:40:44.784

Patient language, and there's a revision on 002.0 to add the following upon or upon any question related to the geological storage of carbon dioxide act or administration of the GS act. Next is chapter 6 rules of practice for the Nebraska.

121

NOGCC Hearing Room 00:40:45.024 --> 00:41:06.084

Gas Commission, so that's part of them. So the cost of a hearing a petition filed within Brasco L. a partition filed with the commission for a public hearing shall be accompanied by a fee of 1500 dollars the notice of time and emergency orders before any rule.

122

NOGCC Hearing Room 00:41:06.265 --> 00:41:27.295

Regulation order, um, commission there should be a public hearing upon which 30 days notice time shall be surprised by the patient. Rainy interested party shall be entitled to be heard, except for emergency requiring that hearing permission.

123

NOGCC Hearing Room 00:41:27.324 --> 00:41:48.174

Shell issue an emergency order without the notice of hearing that shall be an effective upon promulgation for Shelby and remain in effect for no more than 30 days and 006.42 a under 3.

124

NOGCC Hearing Room 00:41:48.624 --> 00:42:05.274

There is an application for the entry of utilization, Nebraska notice the hearing shall be held after an appropriate show, be served on interested parties that are in contained by certified mail. At least it was 15 days, 30 days prior to the data to hearing.

125

NOGCC Hearing Room 00:42:08.395 --> 00:42:18.415

The next highlighted changes for purpose of the carbon storage act, the term interested parties. You mean those persons at home reservoir the state.

126

NOGCC Hearing Room 00:42:22.825 --> 00:42:41.185

006.04 g, in all cases, whereas in application Geological storage, in addition to the notice of the hearing is required by the act, the applicant shall serve notice of the hearing upon interested parties term interested parties show me those persons who own any reservoir estate.

127

NOGCC Hearing Room 00:42:42.534 --> 00:43:03.114

Leasehold mineral royalty, interest and surface Casey or surface owner of the land overlying the storage reservoir and within 1 and a half mile, the storage boundaries, the applicant shall file a, a certificate for a certificate showing the names and.

128

NOGCC Hearing Room 00:43:03.179 --> 00:43:10.854

Addresses interested parties as above defined upon whom the notice has been served and then.

129

NOGCC Hearing Room 00:43:13.049 --> 00:43:33.654

03 issuance permits before issuing a permit the commission sale, consult with the Department of environment, energy, and the underground injection control program, permitting authority if the storage, whereas work contains commercially valuable minerals, permit.

130

NOGCC Hearing Room 00:43:34.554 --> 00:43:55.344

Maybe issued only if the commission is satisfied that the interest of the mineral owners or men releases will not be adversely affected, or has an address in an arrangement entered into, by the mineral owners are mineral leases in the storage operators. 3, the commission may.

131

NOGCC Hearing Room 00:43:55.349 --> 00:44:16.494

Include in a permit or order all things necessary to carry out the objectives of the Nebraska Geological storage in carbon dioxide act and to protect and adjust the perspective rights and obligations of persons affected by the geological storage. If the storage operator.

132

NOGCC Hearing Room 00:44:16.499 --> 00:44:37.464

Does not obtain the consent of all persons who own a reservoir state within the reservoir the commission may require that any risk for states owned by non consulting owners be included in the storage of the subject to Geological storage when the commission issues of permit. It shall also issue a certificate.

133

NOGCC Hearing Room 00:44:37.675 --> 00:44:58.795

Stating that the permit has been issued describing the area covered and containing all other information. The commission means appropriate. The commission shall follow a copy of the certificate with the registry of deeds in the county or counties where storage is located. 004, minor permit.

134

NOGCC Hearing Room 00:44:58.799 --> 00:45:19.944

Locations upon agreement between the storage operating Commission, the commission, and modify a permit to make corrections or allowances without the storage operator, filing an application to amend to permit any permit modifications, not processes minor modifications of the.

135

NOGCC Hearing Room 00:45:19.949 --> 00:45:41.034

Action must be filed with the application to amend the existing permit in compliance with chapter. 6 minor modifications may include corrected typographic, typographical errors, required more frequent monitoring or reporting the storage operator change.

136

NOGCC Hearing Room 00:45:41.099 --> 00:46:01.824

The interim compliance date of the schedule of compliance provided that the new date is not more than 120 days after the dates specified in the existing permit and does not interfere with the attainment of the final compliance date requirement allow for a change in the ownership or operational control the facility with the commission.

137

NOGCC Hearing Room 00:46:02.249 --> 00:46:23.214

Determines that no other change in the storage permit is necessary, provided that a wooden agreement contain the specific date for the transfer of the permit responsibility, coverage and liability and the current and new storage operator has been submitted to the commission change.

138

NOGCC Hearing Room 00:46:23.400 --> 00:46:44.545

Quantities or types of fluids injected, which are within the capacity of the facility as permitted and in the judgment of the commission would not interfere with the operation, the sodium or its ability to meet conditions described in the permit change. Well, construction.

139

NOGCC Hearing Room 00:46:44.549 --> 00:47:05.484

Requirements approved by the commission, provided that such alterations may not comply with the requirements of this chapter and no other changes are physically incorporated in construction of the well, prior to the approval modification Commission, or amend a facility plan where modifications clarifications are.

140

NOGCC Hearing Room 00:47:06.475 --> 00:47:26.845

Correction to the plan are determined by the commission 005, emergency and remedial response plan, the storage operator show and implement the commission approved emergency and remedial response plan and work. The safety plan plan must include emergency response and security procedures.

141

NOGCC Hearing Room 00:47:27.144 --> 00:47:47.994

An emergency and remedial stones response plan, approved, as part of the class 6th permit issued the implicable underground injection control program shall be sufficient to supply the emergency and immediate response plan requirements of the section. The plan, including revision of the list of.

142

NOGCC Hearing Room 00:47:47.999 --> 00:48:08.874

Contractors and equipment vendors must be updated as necessary, or, as the commission requires copies of the plan must be available at the storage facility and the storage operators, nearest operational offices. 1, the emergency and remedial response.

143

NOGCC Hearing Room 00:48:09.325 --> 00:48:30.295

Plan requires a description of the actions of the storage operator. Shell shall take to address the movement of the injection of formation fluids that may endanger underground sources of drinking water during the construction operation and post injection care periods. The requirement to maintain.

144

NOGCC Hearing Room 00:48:30.324 --> 00:48:51.264

And implement a permission approved plan is directly enforceable, regardless of whether or not the requirement is a condition of the permit the plan. Let's also include detail safety procedure concerning the facility, the residential commercial public.

145

NOGCC Hearing Room 00:48:51.565 --> 00:49:12.595

Use within 1, half mile or other districts and set by the commission outside the boundary of the area and contingency plans for addressing carbon dioxide leaks from any well flow line or other facility and loss of containment from storage reservoir and identify specific contractors, equipment, vendors capable of providing.

146

NOGCC Hearing Room 00:49:12.599 --> 00:49:33.504

Services and equipment to respond to such leaks and loss of containment. The storage operator may review annually the emergency and remedial response band, develop under section 1, based on this review, the storage operator. So submit the commission and amended plan.

147

NOGCC Hearing Room 00:49:33.774 --> 00:49:54.744

Or demonstrate to commission that no amendment to the plan is needed any amendments to the plan or subject permissions approval, and must be incorporated into the storage permit and are subject to the permit modification requirements. Many clients are demonstrations at the amendments are not needed shall be.

148

NOGCC Hearing Room 00:49:54.900 --> 00:50:16.045

Admitted to the commission as falls within 1 year of an area of review revaluation balling any significant changes to the facility such as an addition of injection of monitoring walls on a schedule determined by the commission, or when required by the commission.

149

NOGCC Hearing Room 00:50:17.874 --> 00:50:37.194

Paying a class 6 permit from the applicable underground injection control program and complying with the provisions of that permit shall satisfy all the emergency room media response plans of this section reporting requirements. The storage operators show file.

150

NOGCC Hearing Room 00:50:37.200 --> 00:50:57.685

All reports, submittals, notifications and other information that we should requires, including reports submitted to the applicable underground injection control program. The storage operator shall give notice to the commission as soon as possible. If any plan physical alterations or additions to the permitted storage facility.

151

NOGCC Hearing Room 00:50:58.349 --> 00:51:19.494

Or other permitted changes in the permitted storage facility, or activity that may result in non compliance with the permit requirements, reports of compliance, or noncompliance with, or any progress on reports interim or final reports obtained in any compliance schedule. Others permit shall be submitted to.

152

NOGCC Hearing Room 00:51:19.499 --> 00:51:40.344

Better than 30 days following each scheduled date the storage operators show file with the commission semi annually or more. Frequently at the commission requires report on the volume of carbon dioxide injected into, or which were on since the last report, the average injection weight, average compensation in the carbon dioxide streams.

153

NOGCC Hearing Room 00:51:40.675 --> 00:52:01.675

Well, head and downhill temperature and pressure data or calculations or other pertinent operation parameters as required by the condition, your quarter report is due 30 days after the end of the quarter. The report must contain descriptions of any changes to the physical chemical.

154

NOGCC Hearing Room 00:52:01.854 --> 00:52:22.554

Her other relevant characteristics of the carbon dioxide stream from the host operating data state, the monthly, average maximum minimum values for the injection pressure flow rate and volume and annual pressure scribe any event that exceeds operational parameters for annual pressure injection pressure specified in the permit.

155

NOGCC Hearing Room 00:52:22.950 --> 00:52:44.095

Describe any event, which triggers a shut off device required in response taken state. The monthly volume in mass of carbon dioxide stream injected over the reporting period and the volume injected a cumulatively over the life of the project state. The monthly annual fluid.

156

NOGCC Hearing Room 00:52:44.124 --> 00:53:05.244

Volume added and state the results of monitoring the storage operator show file with the commission on an annual report that summarizes the quarterly reports and provides updated projections of the response and storage capability of the storage reservoir. The projections.

157

NOGCC Hearing Room 00:53:05.249 --> 00:53:26.094

He must be based on actual reservoir operating experience, including any new Geological data, and information on anomalies in predictive behavior, as indicated permit conditions or assumptions upon which the permit was issued must be explained and if necessary permit conditions amended.

158

NOGCC Hearing Room 00:53:26.455 --> 00:53:46.555

Annual report is due 45 days at the end of the year the storage operator show report within 30 days, the results of any test and mechanical integrity while work overs and other tests of the injection. Well, conducted by the storage operator required by the commission.

159

NOGCC Hearing Room 00:53:47.634 --> 00:54:08.694

Storage operator share report within 24 hours evidence that any injected carbon dioxide stream or associated pressure flood may cause an endangerment to an underground source of drinking water noncompliance that may endanger the health safety of persons, and cause solutions of the environment, including.

160

NOGCC Hearing Room 00:54:09.745 --> 00:54:29.845

Monitoring or other information that indicate that any containment may cause endangerment to an underground source of drinking water, or non compliance with permit condition, or malfunction of the injection system that may cause flood migration into, between underground sources and drinking water that may.

161

NOGCC Hearing Room 00:54:29.874 --> 00:54:50.994

Be provided verbally within 24 hours from the time the storage operating becomes aware of the circumstances. A written submission shall also be provide within 5 days of the time of the storage of the time. The storage operator becomes aware of these circumstances. A written submission shall contain the description.

162

NOGCC Hearing Room 00:54:51.024 --> 00:55:12.144

Non compliance, and it's caused in the period of noncompliance, including exact dates and times. And if the noncompliance has not been corrected the anticipated time, that is expected to continue in the steps, taken our plan to reduce eliminate prevent recurrence is non.

163

NOGCC Hearing Room 00:55:12.150 --> 00:55:32.755

Clients triggering of a shut off system, a downhill or surface failure to maintain mechanical integrity or releases of inject carbon dioxide into the atmosphere of biosphere is detected by any surface in air gas monitoring.

164

NOGCC Hearing Room 00:55:33.894 --> 00:55:54.444

Or other monitoring technologies is required by the commission, the storage operator may retain the following records until the, until the project complete all data collected for the application of the storage facility, permit injection. Well, permit and operation.

165

NOGCC Hearing Room 00:55:54.450 --> 00:56:15.595

The injection permit data on the nature and composition of all injected fluids, collected all reports from the closure period, including well, plugging reports, post injection site, care, data and final assessment upon project. Completion storage operator shall deliver any records required.

166

NOGCC Hearing Room 00:56:15.624 --> 00:56:36.744

Section to the commission, the storage operator shall remain shall retain the following records for a period of minutes, 10 years from the data, the sample measurement or report monitoring data and calibration maintenance records all original recordings from.

167

NOGCC Hearing Room 00:56:36.749 --> 00:56:57.444

He was monitoring instrumentation in copies of all reports required by the storage facility, permit this period may be extended by the request of the commission. At any time. The storage operator shall report all instances of noncompliance. Not otherwise reported in this section.

168

NOGCC Hearing Room 00:56:57.925 --> 00:57:19.045

At a time monitoring reports were submitted whenever the storage awkward comes where that it is failed to submit any relevant facts in a permit application, or or permit or submit and incorrect information and permit application or an annual report to the commission such facts. And.

169

NOGCC Hearing Room 00:57:19.049 --> 00:57:40.194

Information shall be promptly submitted to the commission here to do so may result in revocation of the permit, depending on the nature of the formation or excuse me, the nature of the information with health attaining a class 6 for me to obtain from the applicable underground injection patrol program and complying with revisions of this permit.

170

NOGCC Hearing Room 00:57:40.285 --> 00:58:00.895

By all the requirements of this section storage permit fees these storage operators shall pay a fee. The commission, a fee of 1 cent per ton of carbon by dog side injected for storage. The fee must be deposited in the carbon dioxide facility storage fund.

171

NOGCC Hearing Room 00:58:01.349 --> 00:58:14.574

The storage operator shall pay the commission fee of 7 cents per ton of carbon dioxide injected for storage. The fee must be to deposit in the carbon dioxide storage, trust fund.

172

NOGCC Hearing Room 00:58:17.214 --> 00:58:37.314

After notice in hearing the commission may issue in order to adjust these fee amounts 7 Geological stories, bond requirements prior to injection operations the operator.

173

NOGCC Hearing Room 00:58:38.035 --> 00:58:59.095

Any storage facility shall submit to the commission, obtain its approval assurity bond or cash bond in the amount specified by the commission and alternative form is security may be approved by the commission. The operator of the storage facility shall be the principal on the bond and provide.

174

NOGCC Hearing Room 00:58:59.160 --> 00:59:19.855

Covered the storage, the to provide the storage facility. Each already launch. I'll be executed by a responsible Shorty company or cash bond provided by the operator authorized to transact. Business in Nebraska commission shall periodically review the bond amount and.

175

NOGCC Hearing Room 00:59:20.309 --> 00:59:41.184

Through public notice in hearing may issue in order to adjust that amount 00 and 9 post injection site care and facility closure. The storage operator shall submit and maintain the post injection site care and facility. Closure plan is part.

176

NOGCC Hearing Room 00:59:41.484 --> 01:00:01.824

Of the storage facilities class, or be approved by the commission, obtaining a class 6 permit from the applicable underground injection control program and complying with revisions of that permit shall satisfy all the requirements of the session for submitting a maintaining a post closure site.

177

NOGCC Hearing Room 01:00:03.084 --> 01:00:23.604

And facility, closure, plant requirement to maintain and implement a commission approved plan is directly enforceable regardless of whether the requirement is a condition of the permit number 1, the post enclosure, the post injection site care and facility closure.

178

NOGCC Hearing Room 01:00:23.875 --> 01:00:44.905

Must include the following information, the pressure differential between the Pre injection and predicted post injection pressures in the injection zone, predictive position of carbon dioxide and associated pressure front of the session of injection, as demonstrated in the area of review evaluation.

179

NOGCC Hearing Room 01:00:45.625 --> 01:01:06.055

The description of post injection monitoring location methods, and proposed frequency the schedule for submitting post injection site, care, monitoring results to the commission and the duration of post injection site monitoring timeframe that ensures non. And.

180

NOGCC Hearing Room 01:01:06.059 --> 01:01:08.454

Increment of underground sources of drinking water.

181

NOGCC Hearing Room 01:01:10.464 --> 01:01:31.434

The storage operator shall specify in the post injection site care and facility closure print which wells will be plugged in, which were remained unplugged to be used as subsurface observation. Wells, subsurface observation and groundwater monitoring wells as approved in the plan must remain in place.

182

NOGCC Hearing Room 01:01:31.440 --> 01:01:36.235

For continued monitoring during the period.

183

NOGCC Hearing Room 01:01:39.684 --> 01:01:59.544

Upon succession of injection the storage operator shall either submit and amended post closure site care and facility closure plan, or demonstrate to the commission through a monitoring and monitoring results monitoring.

184

NOGCC Hearing Room 01:01:59.665 --> 01:02:20.785

That no amendment to the plan is needed any amendments to the post injection site care. Enclosure plan are subject to the commission's approval must be incorporated in the storage facility permit. At any time during the life of the geological storage project, the storage operator may modify.

185

NOGCC Hearing Room 01:02:20.814 --> 01:02:41.934

And re, submit the post injection site care and facility care plan for permissions approval upon succession of injection. All wells, not associated with the monitoring must be properly plugged in abandoned in a matter, which will not allow the movement of injection or formation fluids in danger underground.

186

NOGCC Hearing Room 01:02:41.965 --> 01:03:03.085

Sources of drinking water, all storage facility equipment, superlatives and structures, not associated within the monitoring must be removed and repurposed following the well plugging and removal of all surface equipment. The surface must be required to the commissions specifications that will in general.

187

NOGCC Hearing Room 01:03:03.089 --> 01:03:24.144

Will return the land as closely as practical to its original condition the well casing must be cut off to a depth of 4 feet below the surface and a steel plate loaded on the top, identifying the well name. And that was used for carbon dioxide storage. The commission cell, determining concurrence, the storage operator that Annie.

188

NOGCC Hearing Room 01:03:24.534 --> 01:03:45.384

Post closure monitoring will be conducted and if so develop a monitoring plan for the host's closure, period, including review and final approval of wells to be plugged, the storage operator shall continue to monitor conduct monitoring during the closure plant specified by.

189

NOGCC Hearing Room 01:03:45.390 --> 01:04:06.535

The commission approved post injection site care and facility closure plan. The storage reservoir may apply for production project completion with an alternative post injection site care, monitoring timeframe once a demonstrates and underground sources, the drinking water.

190

NOGCC Hearing Room 01:04:06.864 --> 01:04:26.244

They're no longer endangered the final assessment is complete and the storage operator may apply for the commission for, for certification and project completeness. If the storage operator is unable to determine is unable to demonstrate that underground sources, drinking water are no longer being in danger.

191

NOGCC Hearing Room 01:04:28.044 --> 01:04:48.774

Storage operators continue monitoring the storage facility until full compliance is met and such demonstration may be made before the project complete. The storage operators shall provide a final assessment of the store carbons, carbon dioxide, location, characteristics, future movement.

192

NOGCC Hearing Room 01:04:50.800 --> 01:05:11.945

Of the storage reservoir, the storage operator may submit the final assessment to the commission within 90 days cleaning all the post post site care and facility requirements. The final assessment must include results of computational.

193

NOGCC Hearing Room 01:05:11.949 --> 01:05:33.094

Following performed pursuant to the delineation of the area of review, predicted timeframe for pressure decline within the injection zone, and any other zones that formation fluids may not be forced into any underground sources or drinking.

194

NOGCC Hearing Room 01:05:33.124 --> 01:05:54.244

Water or the timeframe for pressure, decline, or Pre, injection pressures, predicted rate of carbon dioxide migration within the injection zone and predicted timeframe for the session of injection induce migration. The description for the site specific processes that will result in.

195

NOGCC Hearing Room 01:05:54.724 --> 01:06:15.304

Tracking including immobilization, like, capillary, trapping this solution or mineralization at the site. The predictive rate of carbon dioxide, trapping and immobile capital lawyer phase is all phase or minimal phase results of laboratory analysis, research studies or.

196

NOGCC Hearing Room 01:06:15.399 --> 01:06:36.544

Field site specific studies to verify the information required in paragraphs and 4 and 5 a demonstration of the confining zone, including demonstration that is free of transmits false fractures micro fractures and an evaluation of the thick there's permeability and in.

197

NOGCC Hearing Room 01:06:36.550 --> 01:06:57.695

Puberty to impede fluids I E, carbon dioxide formation fluids and the movement any, any other projects in proximity to the predictive modeling of the final extent of carbon dioxide plume area elevated pressures the presence of potential conduit for fluid movement, including plan.

198

NOGCC Hearing Room 01:06:58.054 --> 01:07:18.604

ingestion wells and project manager monitoring wells associated with pro's geological projects description of the well construction and assessment of the quality of plugs of all abandoned wells within the area of review the distance between the injection zone and nearest underground source and drinking water and

199

NOGCC Hearing Room 01:07:18.994 --> 01:07:36.544

The injections an assessment of the operations conducted during the operational period, including the volumes injected volumes, attracted all chemical analysis conducted in a summary of all monitoring efforts report must contain the document.

200

NOGCC Hearing Room 01:07:38.675 --> 01:07:59.705

How carbon dioxide storage, location characterization, and predict how it may move during the post closure period an assessment of future assessment of the funds in the carbon dioxide storage facility, trust fund to ensure that sufficient funds are available to carry out the required activities.

201

NOGCC Hearing Room 01:08:00.245 --> 01:08:20.884

On the date on which they occur, taking to account project, specific risk evaluations, projected timing of activities, including post closure care, and interest accumulated in the trust fund and any additional side specific factors required by the commission.

202

NOGCC Hearing Room 01:08:22.443 --> 01:08:42.034

Information submitted to support the demonstrations in a subdivision, must meet the following criteria analysis and test for final assessment must be accurate reproducible and performed in accordance with acceptable quality assurance, standards and approved quality assurance and quality.

203

NOGCC Hearing Room 01:08:42.065 --> 01:09:03.185

Control my mess address, all aspects of the final assessment estimated techniques must be appropriate and test protocol certified by the United States. Environmental Protection Agency must recipe must be used for. They'll predictive models must be appropriate and tailor to the site condition.

204

NOGCC Hearing Room 01:09:03.189 --> 01:09:24.334

Composition the carbon dioxide stream and injection inside conditions under the life of the geological storage project. Predictive models must be calibrated, using existing formation for existing information. When sufficient data is available sources and basis for modeling assumptions must be disclosed.

205

NOGCC Hearing Room 01:09:24.339 --> 01:09:45.484

Goes to the commission, wherever values are estimated on the basis of known historic information instead of site site specific measurements analysis must be performed to identify and assess parameters post closure monitoring timeframe demonstrates that contribute significantly to.

206

NOGCC Hearing Room 01:09:45.490 --> 01:10:04.955

To uncertainty, the storage operator, shell conduct sensitivity analysis, to determine the effect that that significant uncertainty may contribute to modeling demonstrations and any additional criteria required by the commission.

207

NOGCC Hearing Room 01:10:06.964 --> 01:10:27.754

The storage operators shall provide a copy of an accurate plot certified by a registered surveyor that has been submitted to the county records office designated by the commission. The plat must indicate the location, the injection. Well, relative to the permanently survey.

208

NOGCC Hearing Room 01:10:27.789 --> 01:10:48.934

Benchmark the storage operator must submit a copy of the platform, environmental protection agency of regional administrator's office and Nebraska Department of energy over. Excuse me environment and energy storage operator shell recording notice of the deed on the property on which the injection was located or.

209

NOGCC Hearing Room 01:10:48.939 --> 01:11:10.024

any other document is normally examined during title search that will be perpetually for provide any pertinent purchaser the property that contains the following information the fact that the land has been used to sequester see carbon dioxide the name of the state agency

210

NOGCC Hearing Room 01:11:10.090 --> 01:11:31.175

Local authority, or tribe with which the plot was filed as well as the address of the applicable United States, environmental protection agency, regional office to, which was submitted and the volume of food injected the injection zone zones, which were injected.

211

NOGCC Hearing Room 01:11:31.265 --> 01:11:33.335

And the period which the injection occurred.

212

NOGCC Hearing Room 01:11:36.064 --> 01:11:56.614

Determining storage amounts upon application by a geological storage project operated commission after notice and hearing show issue in order to determine the amount of injected carbon dioxide stored in the reservoir under permit issued to Nebraska.

213

NOGCC Hearing Room 01:11:56.645 --> 01:12:17.765

Statutes 57 dash 16.1, et cetera. The applicant shell pay a processing fee for the storage amount determination. The applicant shall pay a fee or pay a processing be based on the commissions actual processing cost, including data processing.

214

NOGCC Hearing Room 01:12:17.769 --> 01:12:38.914

As determined, by the commission, the following procedures material would be utilized in the fee a record of all clickable processing costs occurred and maintained by the commission upon receiving an application commission shall prepare and submit to the app and the estimate of the processing fee after the commissions work on that application.

215

NOGCC Hearing Room 01:12:38.944 --> 01:12:54.844

See, a final statement will be sent to the applicant, the final processing fee pay before the commission issues, this decision on the application, the application must pay precedence fee. Even if it is withdrawn stratigraphy test tools.

216

NOGCC Hearing Room 01:12:59.284 --> 01:13:18.394

All strong graphic test holes must be drilled as per the rules contained in chapter 3 sections 003004006007 and section 0012generaldrawing rules done add Sidney into.

217

NOGCC Hearing Room 01:13:18.604 --> 01:13:39.544

On this date of the 18th of November 2021, thank you. Direct the blue at this time. Um, commission will accept public testimony. Uh, we will work, uh, pretty much similar to a legislative hearing.

218

NOGCC Hearing Room 01:13:39.905 --> 01:14:00.695

Uh, we will, uh, limit our testimony to 5 minutes per applicant. Uh, our staff here will hold up a yellow card with 1 minute left. Uh, if you'd like, I will give you a 1 minute heads up. So you could wrap up your remarks at 5 minutes. You will hold up a red card like you do uh.

219

NOGCC Hearing Room 01:14:00.700 --> 01:14:21.845

Your comments to a close as quickly as you can, the commission is interested in hearing public testimony today Thank you for coming out the weather has not been the best at this time. Uh, and what we will do, we will ask for components of, uh, the proposed regulations.

220

NOGCC Hearing Room 01:14:22.414 --> 01:14:42.784

Go to all panelists of the proposed regulations and those, that we'd like to testify in a neutral position. So at this time we will open up, uh, testimony for opponents as the proposed regulations. Please, when you come up, um, state your name and address and you may begin your testimony.

221

NOGCC Hearing Room 01:14:56.704 --> 01:15:15.424

Good morning, and I will try to stay on site at 5 minutes. We'll see how this goes on. Yep. Okay. Okay. All right. Good morning. I'm dawn called. Well, the executive director of renewable fuels, Nebraska office in Lincoln, Nebraska, and I live at a good Nebraska. We were.

222

NOGCC Hearing Room 01:15:15.455 --> 01:15:34.325

The opportunity to appear before the oil and gas conservation Commission today to support and provide comments on the proposed regulations for the issuance of permits for geological storage of carbon dioxide. The proposed regulations are mandated by 150 the Nebraska Geological storage of carbon dioxide act, Nebraska.

223

NOGCC Hearing Room 01:15:36.874 --> 01:15:57.664

Sections 510,601, et cetera renewable fuels. Nebraska is the trade association for nebraska's ethanol industry. We are an industry resource, encouraging, public policy that ensures the growth and expansion of the renewable fuels to industry in Nebraska. Our state's 24 ethanol plants, have a capacity to produce 2.6Billion gallons of breath.

224

NOGCC Hearing Room 01:15:57.784 --> 01:16:18.874

On an annual basis ranking Nebraska 2nd in the nation. We are proud that nebraska's ethanol industry contributes some 5Billion dollars to the annual state economy. This technology is becoming increasingly important to Nebraska, ethanol industry in order for you to understand that. It is important to discuss carbon. And the role that Nebraska ethanol can play in lowering carbon.

225

NOGCC Hearing Room 01:16:18.880 --> 01:16:39.995

Emissions the concept of lowering carbon emissions, particularly in the transportation, and energy sector is becoming an ever increasing national issue, many states such as California have already adopted a low carbon fuels standard or CFS, other states and regions are considering some form of low carbon standard and of course, everyone knows the Biden administration.

226

NOGCC Hearing Room 01:16:40.029 --> 01:17:01.174

Strongly advocated for dicarbonate decarbonization. The electricity generating sector ethanol is not only a source of renewable energy. It is also a naturally low carbon fuel source and getting lower all the time. A recent study of researchers from Harvard and Tufts University reported that when accounting for current corn growing.

227

NOGCC Hearing Room 01:17:01.205 --> 01:17:22.325

Practices and ethanol plant, efficiencies and technologies. Today's corn based ethanol is 46% less intensive to put it another way. Ethanol has a 46% smaller carbon footprint than that of conventional gasoline. But Nebraska, Golden Triangle of Corning cattle in close proximity to ethanol production. Researchers have discovered.

228

NOGCC Hearing Room 01:17:22.329 --> 01:17:43.444

That much of Nebraska ethanol is even better from a carbon reduction or footprint perspective States, like California are striving to lower carbon intensive energy and much of nebraska's current ethanol is marketed to California to meet their requirements. As a matter of fact, about 70% of the carbon credits being generated in California in that low carbon fuels.

229

NOGCC Hearing Room 01:17:43.479 --> 01:18:04.594

Standard market is from liquid, renewable fuels, such as ethanol and biodiesel as carbon reductions are increasingly side in states and regions with requirements. Nebraska low carbon ethanol will become more and more marketable, more valuable, more important ongoing research shows. Great promise. When it comes to continuing to lower ethanol, carbon.

230

NOGCC Hearing Room 01:18:04.629 --> 01:18:25.774

Footprint it is not out of the realm of possibility that there will be a day in the not too distant future when through advancements and farming and ethanol plant production technologies, ethanol could be the 1 and only negative carbon energy, carbon energy source in the world as Kristen has ever testified on behalf of the Nebraska.

231

NOGCC Hearing Room 01:18:25.779 --> 01:18:46.924

Commerce at the legislative hearing on 150 this technology is not just important to ethanol producers. She noted a variety of Nebraska businesses from power generation to steel processing to manufacturing could utilize the processes developed in 650 creating a state policy that allows our members to utilize innovative technology.

232

NOGCC Hearing Room 01:18:46.930 --> 01:19:08.075

G, as a solution to emissions, while simultaneously creating economic growth opportunities is a win win for everyone, the need for using Geological storage of carbon dioxide as a technology as well established. The International Energy Agency has consistently highlighted the important role of carbon capture.

233

NOGCC Hearing Room 01:19:08.079 --> 01:19:23.284

Utilization and storage technologies, and achieving that 0 emissions says that without CC us, we would have limited or no solutions for tackling emissions from heavy industry sectors, including.

234

NOGCC Hearing Room 01:19:25.534 --> 01:19:43.804

when congress when congress passed the infrastructure investment in jobs act in november two thousand and twenty one congress included specific findings about this technology and section for zero three zero one and i will let you guys all read those because i'm starting to run a little short on time but i have the documents here for you

235

NOGCC Hearing Room 01:19:46.924 --> 01:20:07.264

I'm gonna skip towards the end here and and just hit our summary and hope that you'll all read through the balance of our comments, the regulations under consideration here today are necessary for Nebraska to provide what the U. S. EPA cannot. And that is certainty regarding property ownership and equitable compensation.

236

NOGCC Hearing Room 01:20:07.300 --> 01:20:28.445

For landowners involved in geological storage projects these regulations also provide Nebraska a key role in partnership with, for assuring that geo logic storage projects provide for safe and effective containment of the stored carbon dioxide. The regulation specifically address the facilities associated with the actual injection of.

237

NOGCC Hearing Room 01:20:28.449 --> 01:20:49.384

Do and the deep sub surface Geological storage reports that will contain the Thank you all for the opportunity to appear here today and provide these comments and there's a lot more and what I provided on paper for all of you. Thank you. I want to make sure people knew that option. If you have written testimony, you can submit that be put into the.

238

NOGCC Hearing Room 01:20:49.625 --> 01:20:55.895

Yep, absolutely and it is here for you thank you guys all for doing what you do. It's perfect for your time. Thank you.

239

NOGCC Hearing Room 01:20:59.824 --> 01:21:06.304

Who have other testifiers you'd like to support, um, the rules and regulations.

240

NOGCC Hearing Room 01:21:09.574 --> 01:21:17.284

Do we have any test fires would like to voice their opposition to the proposed, uh, rules and regulations.

241

NOGCC Hearing Room 01:21:22.175 --> 01:21:27.545

Do you have anyone who would like to testify in a neutral capacity to the proposed rules and regulations.

242

NOGCC Hearing Room 01:21:33.574 --> 01:21:51.634

Well, there are, uh, a number of non local participants that have joined us on the Webex. I would suggest we go alphabetically down through the list to see if they have any comments. Okay. Can you start with calling user number 2?

243

NOGCC Hearing Room 01:21:55.804 --> 01:22:00.664

I sent you a request to unmute your phone if you would like to make a.

244

NOGCC Hearing Room 01:22:29.194 --> 01:22:31.684

You are unmuted call in user number.

245

NOGCC Hearing Room 01:22:48.274 --> 01:22:59.164

Let's move out in the next 1 that shows that they can have, uh, is Colin Meyer sent you a request on mute call and if you'd like to make a change comment.

246

NOGCC Hearing Room 01:23:25.924 --> 01:23:30.244

Down to the person, not only is D.

247

D 01:23:34.715 --> 01:23:36.185

Yeah, no, no testimony.

248

NOGCC Hearing Room 01:23:39.755 --> 01:23:40.265

Issue.

249

NOGCC Hearing Room 01:23:43.774 --> 01:23:44.614

Glacier.

250

Dylan Glaser 01:23:48.125 --> 01:23:50.015

No questions.

251

NOGCC Hearing Room 01:23:50.015 --> 01:23:50.525

You know.

252

NOGCC Hearing Room 01:23:53.704 --> 01:23:55.744

Let's move down to.

253

NOGCC Hearing Room 01:24:17.885 --> 01:24:20.105

Let's move down to John cartilage.

254

Jon Cartlidge 01:24:22.804 --> 01:24:43.654

John cartilage with a Battelle, we, uh, uh, very brief comments. Thank you for the opportunity to, uh, see this hearing and hear this. Uh, and to make, uh, uh, comments, uh, supporting the, uh, regulations, um, has been, uh, active.

255

Jon Cartlidge 01:24:43.684 --> 01:25:04.804

In the development of the technique of carbon orchestration in subsurface Geological, uh, formations. Um, so therefore we are, uh, highly interested in, in developing, uh, this in Nebraska uh, not only from a development standpoint, but from an operational standpoint.

256

Jon Cartlidge 01:25:04.895 --> 01:25:14.135

And we are anxious to hear how this all works out and to see some, some actual permits start being issued.

257

NOGCC Hearing Room 01:25:18.724 --> 01:25:24.394

Thank you for your comments, Robert Van.

258

NOGCC Hearing Room 01:25:49.144 --> 01:25:51.994

Robert, and the last 1 list is Tom. So.

259

tom solon 01:25:54.484 --> 01:25:57.214

No comments or, uh, testimony at this time.

260

NOGCC Hearing Room 01:26:00.725 --> 01:26:04.745

Thank you well, looks like Robert is finally.

261

Robert Van Voorhees 01:26:09.994 --> 01:26:12.304

I spoke previously as Paul end user.

262

NOGCC Hearing Room 01:26:19.265 --> 01:26:30.005

We heard anything no, Robert, we did not, uh, hear you when you were on number 2. if you care to repeat your testimony.

263

Robert Van Voorhees 01:26:30.035 --> 01:26:36.365

Okay, no, I just wanted to express my support for the regulations.

264

Robert Van Voorhees 01:26:36.935 --> 01:26:46.265

And the command, the commission and staff are developing a good program to implement the legislation to move forward with this important technology.

265

NOGCC Hearing Room 01:26:50.674 --> 01:27:06.394

Thank you for your testimony, there's 1 other participant chocolate side that does not have audio or video. I would ask if he wants to make a comment please all on the telephone. Mr. uh, blue.

266

NOGCC Hearing Room 01:27:11.314 --> 01:27:28.564

Any other participants there we've hit everyone there. Chuck? Yes. Okay, again, thank you for everyone for your testimony. Uh, at this time, we will close our public hearing for case number 21.

267

NOGCC Hearing Room 01:27:31.774 --> 01:27:37.564

We will take a brief adjournment and then, uh, we will reconvene.

268

NOGCC Hearing Room 01:27:40.174 --> 01:27:43.834

1140 conduct our regular meeting.

269

NOGCC Hearing Room 01:28:06.334 --> 01:28:06.844